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DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING



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EPA Region 5 Records Ctr.



237676

Ms. Shari Kolak
United States Environmental Protection Agency
Region 5, Superfund Division
77 West Jackson Boulevard (SR-6J)
Chicago, Illinois 60604-3507

Dear Ms. Kolak:

SUBJECT: Allied Paper, Inc./Portage Creek/Kalamazoo River; Willow Boulevard/A-Site
Operable Unit No. 2 (OU2), Draft Record of Decision (ROD)

The Michigan Department of Environmental Quality (MDEQ) has reviewed the draft ROD for OU2. This letter is to formally transmit the comments. These written comments are in addition to the conversation various staff had with you last Wednesday, July 26, 2006. Please include these comments in the Administrative Record.

Comment No. 1: p. 2, 1st paragraph, line four: Please add "*adjacent areas and*" to the sentence that states "...reduce potential PCB migration (via erosion or surface water runoff) into **adjacent areas and** the Kalamazoo River."

Comment No. 2: p. 2, 1st bullet item: In order to make this paragraph more consistent with the OU2 Focused Feasibility Study (FFS) and Proposed Plan (PP), I would modify the paragraph to state: "*Excavation of approximately 13,800 cubic yards of PCB-contaminated material from areas adjacent to the Willow Boulevard and A-Site Landfills including the Area South of the A-Site Berm, the Area East of Davis Creek, the AMW-3A area, and the Willow Boulevard Drainageway, and consolidation of that material back into the A-Site Landfill.*" The Remedial Investigation/Focused Feasibility Study (RI/FFS) and PP specifically indicate the material will be placed at A-Site, and not at the Willow Boulevard Landfill.

Comment No. 3: p. 3, 4th Bullet Item: It is hoped that ROD implementation will not be delayed due to negotiations for an Administrative Order on Consent for the Georgia-Pacific and Hawthorne Mill removal action. Possible language that could be inserted into the draft ROD to address this concern might be similar to the following: "*...in a timeframe that will not delay implementation of the ROD,*" or another possible option: "*...before Remedial Design is initiated.*"

Comment No. 4: p. 5, 3rd full paragraph: Delete part of the last sentence including "...with the exception of the King Highway Landfill, which is closed (capped and undergoing long-term monitoring and maintenance)." The sentence would end after the word "program."

Comment No. 5: p. 5, next to last sentence: Delete the words "the closed" regarding the King Highway Landfill. Also delete the hyphen from "King-Highway" as it appears in this next to last sentence, as well as other locations in this paragraph and in line three of the previous paragraph.

Comment No. 6: p. 6, Section 2.0; 2nd sentence: It might be worth indicating what year the aerial photograph is from. The landfill and/or landfill areas have changed over the years and providing a date for the aerial may add some perspective.

Comment No. 7: p. 6, last paragraph, 6th sentence: It appears that the "In April 1987" date listed should be "**1999**" rather than 1987.

Comment No. 8: p. 9, 1st paragraph: It is recommended that the words "*and adjacent areas*" be added to the 2nd sentence that states: "The selected remedy will also eliminate potential migration of PCBs from the landfills **and adjacent areas** (via erosion or surface water runoff) into the Kalamazoo River, thereby..."

Comment No. 9: Section 5.1, 2nd bullet item: It is not clear why in the second sentence it states "...only if subsurface residuals were dug up..." Even within this paragraph it is acknowledged that polychlorinated biphenyl (PCB) contaminated material is present at the surface; therefore, the dermal contact exposure pathway exists and is not dependent upon subsurface soils being brought to the surface. Also, the following bold text should be added near the beginning of sentence two so this sentence states "...landfills **and the adjacent areas**, the pathway..." Also, at the end of this paragraph it is recommended that text be added that states "**and the transport of contaminated material into surface water via erosion by surface water runoff.**" This is a previously identified exposure pathway that should be included in this section of the report.

Comment No. 10: Section 5.1, 3rd bullet item: This bullet information is misleading. The very fact that air/dust monitoring is required during activities and it is also a component of health and safety planning, supports that PCB transport in air can be a pathway of concern. Modification by adding text would better describe this potential exposure scenario.

Comment No. 11: Section 5.1, 4th bullet item: The last sentence should be revised by deleting the words "likely to be" and inserting the words "**humans and**" before "aquatic ecological receptors." The revised sentence should read: "Migration of PCBs into the Kalamazoo River is a pathway of concern for humans and aquatic ecological receptors such as mink that uptake PCBs through consumption of fish." This is a recognized pathway rather than a "likely" pathway, and this pathway is present for both humans and aquatic biota, thus the recommended revisions.

Comment No. 12: Section 5.1, 5th bullet item: The 5th bullet item states that the "Fate and transport of PCBs in the environment is limited by their low water solubility and the presence of low permeability soils at OU2." This statement does not describe site soils or the hydrogeologic characteristics of the soils at OU2. It is more accurate to reflect that the permeability of the residual waste material is low; however, the native soils surrounding the residual waste material are very permeable and provide for a conductive transport path to the Kalamazoo River.

It should also be recognized in this section of the ROD that transport of PCB is not limited to dissolved-phase transport, but also exists as particulate transport (e.g., colloidal transport). PCBs in groundwater that are adsorbed to solids are subject to transport depending on the characteristics of the aquifer and the adsorbed substrate. These observations are consistent with the OU2 RI/FFS.

Comment No. 13: Section 5.1, 6th bullet item: The purpose of this comment is to recognize that only three sediment samples have been collected from Davis Creek, and those were collected a dozen years ago. The landfills and adjacent areas have been subject to erosive forces since those samples were collected, and it would seem prudent to confirm anew that Davis Creek hasn't been impacted.

Comment No. 14: p. 10, 1st bullet: The first sentence of this information is not factually correct; that is, PCBs have been detected in groundwater at the Willow Boulevard Landfill and that data are well documented, including in the RI/FFS. Existing groundwater quality data from the A-Site are not adequate. It is recommended that this bullet information be completely revised to better summarize the existing groundwater quality data set.

Comment No. 15: p. 10, 2nd bullet item: The words "are likely" should be replaced with the words "**may be**."

Comment No. 16: p. 10, 3rd bullet item: This bullet item states that "The existing monitoring network is not adequate to determine whether groundwater is contaminated." This is not an accurate statement and it should be revised. It is already known that groundwater is contaminated. The existing data set clearly demonstrates an influence of the contaminated material on groundwater, which for hydrophilic constituents is uncontested; however, there may be uncertainty regarding the concentration of particular constituents of concern (i.e., for the most part, hydrophobic constituents).

Comment No. 17: p. 10, 2nd paragraph, last word: It is recommended that the word "fall" be replaced with "**summer**." In general, water levels in summer tend to be lower than those observed during fall season.

Comment No. 18: p. 14, Section 5.4: The last sentence of this paragraph recognizes that the landfills and adjacent areas may have impacted Davis Creek. The point of this comment is that there is potential for Davis Creek to be impacted, and it should be investigated (and remediated, if necessary) as part of OU2, or, it should be acknowledged in the ROD that Davis Creek will be addressed and remediated, if necessary, as part of the cleanup action for OU5. It likely would be most efficient and beneficial to investigate and remediate (if necessary) Davis Creek (adjacent to OU2) during the remedial action (RA) for OU2 than it would be later.

Comment No. 19: Section 5.5: This paragraph should be revised. The word "**primary**" should be inserted as the fourth word in the first sentence, before the word "contaminant." The remaining text of this section should be completely rewritten. The current paragraph makes specific statements regarding affected media, which are not entirely accurate; for example, it is the surficial soils at the AMW-3A area that are the primary concern and reason for RA in that area, rather than subsurface soil as stated in this paragraph. Also, the current text makes no mention of impacted sediment present in the Area East of Davis Creek, for example. It is recommended that the text be revised in such a manner that indicates "PCB-contaminated material that is present in the landfills or that has migrated into the adjacent areas are the primary concern." It should also be recognized within this section that groundwater has not yet been adequately investigated. Groundwater quality results obtained thus far have shown elevated concentrations of PCBs and metals.

Comment No. 20: p. 15, paragraph 1, last sentence: It is recommended that the words "will vary" be replaced with "**may vary**" and, that "selected" as the last word be replaced with "**appropriate for those areas**."

Comment No. 21: p. 16, first paragraph: This paragraph summarizes RI data collected from Willow Boulevard Landfill, but does not include any discussion of groundwater results. Groundwater data should be included.

Comment No. 22: p. 16, Interim Removal Action Summary: This brief summary should state the matrix that was sampled (e.g., sediment) and from where the samples were collected (e.g., in the Kalamazoo River adjacent to Willow Boulevard Landfill). Currently, the matrix is not identified and there is no indication of where the samples were collected. Also, in the last sentence of this paragraph there is parenthetical text that states "(if at concentrations that requires remedial action)"; this text should be deleted. It is not necessary and can be easily misinterpreted. However, stating that "the PCB-containing material in the river will be addressed as part of the remedy for the river" is sufficient and unambiguous.

Comment No. 23: p. 17, Interim Removal Action Summary: See comment 20; similarly, this text should state the matrix that was sampled (e.g., sediment) and where the samples were collected from (within the Kalamazoo River).

Comment No. 24: p. 18, 2nd line: It is stated that PCB concentrations ranged from 0.94 milligrams per kilogram (mg/kg) to 62 mg/kg; it is not clear where the 62 mg/kg information was obtained. Data in the RI/FFS report, Table 4-6A, does not show a maximum concentration of 62 mg/kg, rather, it shows 23 mg/kg as the maximum.

Comment No. 25: p. 19-20: This portion of the ROD discusses qualitative risks and lists, via bullet items, cleanup criteria necessary to be protective of various land use, and exposure scenarios. The second paragraph on this page should include the language that **"...the most significant exposure pathway is the consumption of fish."** Also this criterion should be added as a bullet item by incorporating the following text: **"The human health risk (HHRA) assessment developed sediment concentration criteria that are protective for anglers consuming fish at ingestion rates specified for sport and subsistence anglers. Criteria for persons consuming a combination of smallmouth bass and carp range from 0.04 mg/kg for the subsistence angler to 0.30 mg/kg for the central tendency sport angler. Because the MDEQ has a target detection limit (TDL) of 0.33 mg/kg for PCBs, the cleanup criteria protective for people consuming fish currently defaults to the 0.33 mg/kg."**

Comment No. 26: p. 20, bullet items: The bullet items list risk ranges by using no observed adverse effect level (NOAEL) to lowest observed adverse effect level (LOAEL) concentrations. Using a "risk range" for criteria, specifically, using the LOAEL is not consistent with guidance material. To be consistent with the RI/FFS and United States Environmental Protection Agency's (U.S. EPA) "Ecological Risk Assessment Guidance for Superfund, dated June 5, 1997 (as directed by the *Issuance of Final Guidance: Ecological Risk Assessment and Risk Management Principals for Superfund Sites*, dated October 7, 1999) only the NOAEL criteria should be used. References to the LOAEL also occur in several other areas of the ROD, including Table 5, on pages 23 through 25. Reference to the LOAEL should be deleted throughout the ROD.

Comment No. 27: p. 21, Section 7.2: The statement is made that all areas are zoned industrial except for the AMV-3A area and Willow Boulevard Landfill. It seems possible that the Willow Boulevard Drainageway might also be "un-zoned." It may be prudent to review the zoning to confirm if this is so, as well as the zoning of the other areas. This type of review will certainly have to be done as part of remedial design.

In line seven of this paragraph, it is stated that "The AMW-3A area is zoned residential." That is a duplicative statement because the previous sentence already says that, and the sentence on line seven could be deleted to avoid the duplication. Lastly, this paragraph fails to recognize the human consumption of fish exposure scenario which is recognized as an exposure pathway elsewhere in this ROD [p. 8, 1st paragraph; p. 9, 4th bullet; p. 19, last line; and p. 20 ("erosion into aquatic habitat")]. It is also recognized as the most significant exposure pathway in the RI/FFS; consequently, it should be included in this paragraph. The language proposed in Comment No. 25 could be included here, or information from Section 6.2.1 of the RI/FFS would be appropriate.

Comment No. 28: p. 22, Table 5: The LOAEL acronym and LOAEL criterion included in the Aquatic Criteria column should be deleted, as discussed in Comment No. 26. Based on Technical Memorandum 9, a very small portion of the Willow Boulevard Drainageway should have aquatic criteria of 0.33 mg/kg as the applicable criteria, whereas the remaining portion of the Willow Drainageway should have 0.50 mg/kg as the applicable criteria. However, it should be noted that the ultimate disposition of the Willow Boulevard Drainageway Area or other areas of the OU may affect what the applicable criteria should be. The ultimate disposition of each area of the OU, following RA, should be included in the ROD (subsequent pages 23 and 24).

The applicable criteria for the Area South of the A-Site Berm, the Former Olmstead Creek, and the Area East of Davis Creek, which are within the wetland boundaries described in Technical Memorandum 9, should have 0.33 mg/kg as the applicable criteria. Any remaining portion of those areas that are not within the wetland boundaries should have the NOAEL criterion of 0.50 mg/kg as the applicable criteria.

Footnotes 3 and 4 should be deleted, and an additional footnote should be added stating that the shaded criterion is the applicable criteria, even though it is already discussed at the bottom of page 21.

Comment No. 29: p. 23 and 24, Section 7.2 continued: Previous comments were made regarding use of the LOAEL, the ultimate disposition of the adjacent areas, and recognition and inclusion of the fish consumption (by humans) exposure pathway and criteria; those comments are applicable to all of section 7.2 and the entire ROD.

Comment No. 30: This is a specific comment for the current paragraph one, p. 23: It is expected that this paragraph will be revised in a manner that addresses comment No. 28, but the following comments are provided that may be useful for tweaking any existing text that remains:

Text should be added after the 16 mg/kg in line two that says "**based on data collected,**" or, "**at locations explored.**" The results represent concentrations at locations explored only; it would be (or is) somewhat surprising that there are no surficial residuals with PCB concentrations above 6.5 mg/kg in the Willow Boulevard Landfill. By adding the proposed text mentioned above, it gives more credibility to the statement. In line eight, it is stated: "...to aquatic receptors (mink) that uptake PCBs from the consumption of Kalamazoo River Fish." This portion of the sentence should be deleted and the sentence ended after the word "risk." This paragraph doesn't address the consumption of fish by human exposure pathway that would occur with continued erosion. The current text could be interpreted to specifically imply that human consumption of fish is not an exposure pathway.

The point of Comment No. 30 is to suggest there may be a better way to write this paragraph to support that a source control remedy is needed for the Willow Boulevard Landfill to reduce or eliminate unacceptable exposure.

Comment No. 31: p. 23, 2nd paragraph: See Comments No. 26 through 29.

Comment No. 33: p. 23, 3rd paragraph: See Comments 26 through 29.

Comment No. 34: p. 24: See Comments 26 through 29.

Comment No. 35: p. 25, AMW-3A Area: See Comments 26 through 29.

Comment No. 36: Section 7.3: The Human Consumption of Fish Exposure scenario is a basis for action at this OU and it should be discussed in this section of the ROD.

Comment No. 37: p. 26, Section 9.0: It is stated in lines four and five that "Alternative 2 is divided into three separate alternatives..." Actually, Alternative 2 is only one alternative, so the text needs to be modified; however, Alternative 2 is not a stand-alone remedy. One of three "bank stabilization" alternatives (2A, 2B, 2C) will be incorporated into Alternative 2. It is recommended that in order to be consistent with the RI/FFS and the PP, language from those documents describing Alternative 2 be added to better describe the alternatives in Section 9.0 of the ROD. Also, it should be recognized that an evaluation to determine if methane monitoring is necessary is an expected component of "operation and maintenance."

Comment No. 38: p. 27, the Alternatives: As discussed in the prior comment, Alternative 2 should be listed as it appeared in the RI/FFS and PP, along with the bank stabilization options (2A, 2B, 2C).

Comment No. 39: p. 28-31: See comment No. 37; the "Description of Alternative" text on these pages should be replaced with language from the RI/FFS and PP. Other comments pertaining to the "Description of Alternatives" are not being forwarded with the assumption that the language from the RI/FFS and PP will replace the current text.

Comment No. 40: The costs of each alternative should be consistent with the cost included in the Table on page 39.

Comment No. 41: p. 33, Section 9.2.1: Alternative 2 along with the three stabilization options (2A, 2B, and 2C) should be identified, rather than identifying 2A, 2B, and 2C as alternatives.

Comment No. 42: p. 40, Section 12.0: The beginning of the first sentence should be modified to read "**Alternative 2, with stabilization option 2C is the selected remedy for OU2 and consists...**"

The phrase "**and adjacent areas.**" should be added after the words "Kalamazoo River" in the last line of page 40.

Comment No. 43: p. 41, Section 12.1, Item 1: Insert the words "**reduced or**" before the word "eliminated"; and add the following to the end of the sentence: "**and further erosion of PCB-contaminated material into the Kalamazoo River and adjacent areas.**"

Comment No. 44: p. 42, Section 12.2: When groundwater monitoring is mentioned in the draft ROD as part of the remedy, the description is generally limited to "groundwater monitoring will be conducted." It is necessary to specifically identify that the groundwater monitoring network design will be consistent with Rule 716 of Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. If appropriate, the ROD could also make reference to RRD Operational Memorandum No. 4, which serves to insure consistency with Part 201.

This section of the ROD should also explain that the data quality from the existing monitoring network is not adequate for evaluation or for measuring compliance with the applicable criteria. At all appropriate locations in the ROD, it should be stated that an approved groundwater monitoring network is necessary. The language from the PP that we discussed during our phone call should be included in this section for purposes of explaining how groundwater data will be used (i.e., for evaluating integrity of cap, etc.) as part of the remedy for the site.

Comment No. 45: Section 12.4: The reference to the LOAEL concentration should be deleted to be consistent with U.S. EPA guidance (see Comment No. 24). The sentence that begins with "An aquatic criterion of 0.50..." should be deleted. The wetlands present at this OU are inundated for greater than one month; and, therefore, the scenario described in the third sentence is not applicable. Lastly, the fish consumption exposure pathway is not addressed in this section either. The 0.33 mg/kg criterion and human consumption of fish exposure pathway should be included.

Comment No. 46: Section 13.1: The first sentence should state: "The selected remedy will **reduce or** eliminate..." The words "reduce or" should be inserted as highlighted.


Comment No. 47: Section 13.2: In line one, following the word "ARARs," insert "**(where Acts are cited, it includes the associated rules)**."

Comment No. 48: The ROD mentions seven OUs on page 8; Figure 3, however, only shows four. This figure could be updated to show all seven recognized OUs.

Comment No. 49: Figure 4: The date of the aerial photograph should be provided.

Please feel free to contact me if you would like to discuss any of these comments in more detail.

Sincerely,



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cc: Mr. Thomas Short, U.S. EPA
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